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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/208,962 12/10/98 ELCO

R 4414-D

EXAMINER

MM41/0831

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LAW DEPARTMENT
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ABRAMS, N
ART UNIT

PAPER NUMBER

2839
DATE MAILED:

08/31/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/208962

Applicant(s)

Examiner

N. Abrams

Group Art Unit

2839

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 8-13-01 (RCE and pre-amdt)
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1, 2, 4-20, 22-45 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1, 2, 4-20, 22-45 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The proposed drawing correction, filed on 10-5-99 is ☒ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit: 2839

The request for continued examination (RCE) is acknowledged. A first action follows.

Parent case paragraph must be updated when data is known.

Claims 18-31, 43, 32-40, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Romine in view of Teka, Noschese, Seidler, Swamy, Johary and Apap. ^{Bitaillo}

See discussion in last office action. The use of fusion to join the Romine contacts to solder masses ^{is suggested} further ~~by~~ ^{and Bitaillo} by Apap and Johary, see fig. 7. Solder mass use also taught by Teka.

Claims 18-31, 43, 32-40, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman or Kandybowski, either one taken in view of Teka, Romine, Noschese, Seidler, Swamy, Johary and Apap. ^{Bitaillo}

See last office action, Further obvious to fuse solder masses to main reference contacts in view of Apap and Johary, see fig. 7. ^{Bitaillo}

Claims 1-17, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fedder in view of Teka, Noschese, Swamy, Romine, Seidler, Feldman, Apap, Johary and Kandybowski. ^{Bitaillo}

See last office action. Also obvious to join solder masses to Fedder contacts in view of Teka, Apap and Johary. ^{Bitaillo} Also obvious to form all contacts as surface mounted types with tails in recesses in view of Feldman at 16, 36 and Kandybowski at 38.

Claims 1-17, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kandybowski in view of Johary, Apap, Swamy, Teka, Romine and Noschese. ^{Bitaillo}

Art Unit: 2839

See Kandybowski, fig. 4, connector 84, with central rows of signal contacts 106 between ground contacts 96. Also obvious to include, on each side three signal contact rows and two ground rows with a signal row between ground rows. Also obvious to add solder masses to contact tails 104, 108, etc in view of Noschese, figs. 1, 2 and 12, 13 embodiments, Swamy, Teka, ^{Bitailou} Romine, Apap and Johary.

As an alternative, obvious to form connector 84 with pcb mount face like that of the lower connector 22. Also obvious to fix solder masses to tails 54, 78 at such mounting face in view of ^{Bitailou} Noschese, Romine, Teka, Swamy, Apap and Johary. Also obvious to form all contacts as surface mount type. For claim 13, note recesses 38.

Applicant's arguments filed with the last amendment have been fully considered but they are not persuasive.

As to arguments on page 5 the Fedder contacts 104 are seen to have an elongated shape transversely of ground contacts 110. For claim 13, see discussions above. The page 6, "remaining away" argument is unclear, with attached solder masses as in Seidler, Swamy or Johary the surface mount contacts would be spaced from the circuit board prior to reflow, see Seidler, fig. 9.

As to argument on page 7 "fused to contact" see Noschese, fig. 13, Apap ^{Bitailou} and Johary. Also solder masses adhered as in Johary, figs. 7, 8 would be further from the housing ^{than} ~~are~~ are the terminal ends. As to arguments on page 10, claims in the case do not require attachment "only" by surface soldering. In addition, both Teka and Swamy show connectors mounted solely by

Application/Control Number: 09/208,962

Page 4


Art Unit: 2839

surface solder. For Romine, use of part 60 is optional. As to page 11, the Swamy device is sufficiently pertinent as to teachings of solder ball use as applied above.

Any inquiry concerning this communication should be directed to N. Abrams at telephone number (703) 308-1729.

Abrams/nt

8/29/01


NEIL ABRAMS
EXAMINER
ART UNIT 322